TANU, G.; MARUSCIAC, D.

Physicomechanical characteristics of vulcanic tuffs in the [illegible] region and technical and economical indexes of apartment house walls made of these tuffs. Bul stiint polit Cluj 6:197-21 '63.

M[illegible]C[illegible]AC, [illegible]

An algorism for [illegible] a system of inequalities [illegible] a Un[illegible]
B-B S. Math-Phys [illegible] 51-57 [illegible]5.

MARUSCIAC, I.

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A mining cutter-loader. Tekh.mol. 22 no.11:27 N '54.(MLRA 7:12)
(Mining machinery)

MARUSENKO, A. V.

Dynamics of dextroventricular hypertrophy in the vectocardiographic illumination of persons with pneumocardial insufficiency. Vrach. delo no.6:67-73 Je '62. (MIRA 15:7)

1. Kafedra fakul'tetsko-gospital'noy terapii (zav. - prof. L. T. Malaya) sanitarno-gigiyenicheskogo i pediatricheskogo fakul'tetov Khar'kovskogo meditsinskogo instituta.

(PULMONARY HEART DISEASE) (ELECTROCARDIOGRAPHY)

MARUSENKO, T. A.

Marusenko, T. A. - "The prophylactic activity of the typhus bacteriophage on experimental animals", Mikrobiol. zhurnal, Vol. XI, Issue 1, 1949, p. 91-96, (In Ukrainian, resume in Russian).

SO: U-4329, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

MARUSEV'C, T. A.

25969. Marusenko, T. A. Profilakticheskoye e stvne spetsificheskogo bakteriofaga na eksperimental'nyy paratif V u laboratornykh zhivotnykh. Mikrobiol. zhurnal, T. XI, Vyp. 2, 1949, s. 47-56.--- a ukr. yaz.---Rezyume na rus. yaz.

SO: Knizhnaya Letopis', Vol. 1, 19

VIZIR, P.Ye.; MARUSENKO, T.A.

Synergism of the effect of penicillin and of a specific bacteriophage on Breslau infection in white mice. Mikrobiol.zhur. 14 no.4:29-35 '52. (MLRA 6:11)

1. Z Institutu mikrobiologii Akademii nauk URSR.
(Penicillin) (Bacteriophagy)

PETROV, D.G., dotsent; KHIVORUCHKO, R.A.; MARUSENKO, V.I.

Method for individual bacteriological sterility control of preserved blood. Probl. gemat. i perel. krovi no.10:58-60 '64.

(MIRA 17:12)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta perelivaniya krovi (direktor - dotsent D.G. Petrov).

MARUSENKO, Ya.I.

Goniometer for determining the angle of inclination of the cable.
Meteor.i gidrol. no.2:49-50 F '52. (MLRA 8:9)
(Goniometry) (Stream measurements)

1. MARUSENKO, Ya. I.

2. USSR (600)

4. Rivers

7. Wave-cut steps on river banks. Priroda 42, No. 4, 1953.

Describes role of wind waves in the dynamics of river beds under natural conditions. States that action of wind waves on river banks differs from the action on sea, lake, and water reservoir shore lines.

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MARUSENKO, Ya.I.

Regionalization of the U.S.S.R. territory on the basis of modern fluvital processes. Trudy TGU 147:84-100 '57. (MIRA 16:5)

1. Kafedra obshchey geografii Tomskogo gosudarstvennogo universiteta imeni Kuybyshева.
(Rivers)

MARUSENKO, Yakov, Il'ich; ZEMTSOV, Aleksey Anisimovich; SEMLYANSKAYA, Lidiya Pavlovna; PANKOV, Arkadiy Mikhaylovich; MININ, Nikolay Kondrat'yevich; MORDOVINA, L.G., tekhn. red.

[Hydrography of Western Siberia] Gidrografiia Zapadnoi Sibiri. Tomsk, Izd-vo Tomskogo univ. Vol.1. [General characteristics of waters] Obshchaia kharakteristika vod. 1961. 169 p. (MIRA 14:11)

(Siberia, Western—Hydrography)

SKLOVSKAYA, A.A., otv. red.; DREMAYLO, P.G., inzh., zam. otv. red.; KAMINSKIY, V.S., kand. tekhn. nauk, zam. otv. red.; AVETISYAN, A.N., red.; BRILLIANTOV, V.V., kand. tekhn. nauk, red.; GALIGUZOV, N.S., kand. tekhn. nauk, red.; GORLOV, I.P., red.; GREBENSHCHIKOV, V.P., red.; DAVYDKOV, M.I., red.; ZVENIGORODSKIY, G.Z., red.; KARPOVA, N.N., red.; KOZKO, A.I., red.; MARUSEV, P.A., red.; PONOMAREV, I.V., red.; POPUTNIKOV, F.A., red.; SOKOLOVA, M.S., kand. tekhn. nauk, red.; TURCHENKO, V.K., red.; FILIPPOV, V.A., red.; YUSIPOV, A.A., red.; YAGODKINA, T.K., red.; MIRONOVA, T.A., red. izd-va; LOMILINA, L.N., tekhn. red.; MAKSIMOVA, V.V., tekhn.red.

[Technological trends in coal preparation] Tekhnicheskie napravleniia obogashcheniia uglei. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1963. 120 p. (MIRA 16:10)

1. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley. 2. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley (for Yagodkina, Brilliantov).
(Coal preparation)

KORIN, P.I., kand. med. nauk; MIRIC V, Ye.A.

Late results of the treatment of [illegible] of the urinary bladder.
Urologiia 29 no.1:46-49 '64. (MIRA 17:8)

1. Gorodskaya khirurgicheskaya klinika (zav. - prof. G.D. Obraztsov) Chelyabinskogo meditsinskogo instituta i Oblastnoy klinicheskiy bol'nitsy.

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"On the Influence [redacted] Proprioceptors of the Skeletal Muscle of the Frog," Dok. A[redacted], [redacted], [redacted], 1948. L[redacted]. P[redacted]. Symposium on [redacted]; Inst. P[redacted] im. I. P. P[redacted], [redacted].

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"On the Activity of Proprioceptors of Various Muscle Groups of a Frog." Zef. Zhur., Vol 33, No 5, 1947, p 535. Physiology nst imeni Academician I. P. Pavlov, Acad Sci USSR.

SO: U-4396

MAR'[illegible] A, A. [illegible].

"Symptomatic Infection of the [illegible]-Parietal- ([illegible]) Area, Brodmann's Area No. 37 and the Frontal [illegible] of the Lower Parietal Area, Brodmann's Area No. [illegible]," Zhurnal. i. Psikhiat., [illegible], No. [illegible], [illegible].

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KOZHEVNIKOV, V. A.; MARUSEVA, A. M.

Mbr., Lab. of Physiology of Sense Organs, Inst. Physiology Im. Acad. I. P. Pavlov Acad. Sci., -1949-.

"Electroencephalographic Study of the Formation of Temporary Contacts in Imperceptible Stimuli of Humans," Iz. Ak. Nauk. SSSR, Ser. Biol., No. 5, 1949.

SO: Monthly List of Russian Accessions, Library of Congress, _____1953, Uncl

MARUSEVA, A.M.; RABINOVICH, L.G. [deceased]

Effect of certain chemicals on electric manifestations of the activity of the cochlea and the acoustic nerve. Probl.fiziol. akust. 2:72-81 '50 (MIRA 10:11)

1. Laboratoriya fiziologii organov chuvstv Fiziologicheskogo instituta im. akd. I.P.Pavlova AN SSSR.
(ELECTROPHYSIOLOGY) (PHARMACOLOGY) (ACOUSTIC NERVE)
(LABYRINTH (EAR))

MARUSEVA, A.M.; RABINOVICH, L.G.

Effect of certain chemical substances on electric manifestations of cochlea and acoustic nerve. Probl.fiziol.akust.,Moskva Vol.2:74-81 1950. (CLML 20:5)

1. Laboratory of the Physiology of Sense Organs, Physiological Institute imeni Academician I.P.Pavlov of the Academy of Sciences USSR.

MARUSEVA, A.M.

MARUSEVA, A.M.; CHISTOVICH, L.A.

Modification of auditory analyser function in man following verbal action applied during experimental studies of the sensory organs. Zhur.vys.nerv. deiat. 4 no.4:465-473 Jl-Ag '54. (MLRA 8:3)

1. Institut fiziologii im. I.P.Pavlova Akademii nauk SSSR.
(HEARING, physiology,
eff. of verbal stimulus on auditory analyser during experimentation on sensory organs in man)

MARUSEVA, A.M.

Measurement of the limits of sound signal discrimination in man.
Probl.fiziol.akust. 3:60-66 '55. (MLRA 9:5)

1. Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii imeni I.P.Pavlova AMN SSSR, Leningrad.
(SOUND--MEASUREMENT) (HEARING) (REFLEXES)

MARUSEVA, A.M.

Changes in the sensibility of sound analyser in man during the process of developing differentiation. Trudy Inst.fiziol. 5:358-367 '56.
(MLRA 10:1)

1. Laboratoriya fiziologii slukhovogo analizatora. Zaveduyushchiy - G.V.Gershuni.

(CONDITIONED RESPONSE) (HEARING)

MARUSEVA, A.M., kandidat biologicheskikh nauk (Leningrad)

Auditory acuity in children at the age of 1 1/2 to 2 1/2 years. Vest.otorin. 18 no.2:22-27 Mr-Ap '56. (MLRA 9:7)

1. Iz laboratorii fiziologii slukhovogo analizatora Instituta fiziologii imeni I.P.Pavlova

(HEARING, in inf. and child
auditory acuity in small child)

MAKUSEVA, A.M.

Auditory sinsitivity in man as influenced by training. Probl.fiziol. akust. 4:100-106 '59. (MIRA 13:5)

1. Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad.
(AUDIOMETRY)

MAKUSEVA, A.M.

Measurement of hearing in children during their first years of life. Probl.fiziol.akust. 4:123-132 '59. (MIRA 13:5)

1. Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii imeni I.P. Pavlova AN SSSR, Leningrad.
(AUDIOMETRY) (CHILDREN)

AL'TMAN, Ya.A.; MARUSEVA, A.M.

Method for leading off potentials from different points of the auditory system of the cat under long-term experimental conditions. Physiol.zhur. 45 no.6:724-729 Je '59. (MIRA 12:8)

1. From the laboratory of auditory analyser physiology, I.P. Pavlov Institute of Physiology, Leningrad.
(EAR, physiol.
potentials from different points of auditory system, method of derivation in chronic exper. cond. in cats (Rus))
(NEUROPHYSIOLOGY
method of derivation of potentials from different points of auditory system of cat in chronic exper. cond. (Rus))

AL'TMAN, Ya.A.; MARUSEVA, A.M.

Characteristics of electric reactions from different parts of the auditory system in anesthetized and nonanesthetized animals. Fiziol. zhur. 46 no.11:1345-1355 N '60. (MIRA 13:11)

1. From the Laboratory of the Auditory Analyzer Physiology, Pavlov Institute of Physiology, Leningrad.
(ELECTROPHYSIOLOGY) (ANESTHESIA)
(EAR--INNERVATION)

AL'TMAN, Ya.A.; MARUSEVA, A.N.

Electric responses of different parts of the auditory system to consecutive sound stimulations. Dokl. AN SSSR 135 no.6:1546-1549 D '60. (MIRA 13:12)

1. Institut fiziologii im. I.P.Pavlova, Akademii nauk SSSR. Predstavleno akademikom V.N. Chernigovskim.
(EAR--INNERVATION) (ELECTROPHYSIOLOGY)

MARUSEVA, A.M.

Electrophysiological expression of changes in the function of the auditory system in the presence of the orientation response. Fiziol. zhur. 47 no.5:542-550 My '61. (MIRA 14:5)

1. From the Laboratory of Auditory Analyzer Physiology, I.P.Pavlov Institute of Physiology, Leningrad.
(ELECTROPHYSIOLOGY) (EAR)

KLYAVINA, M.P.; MARUSEVA, A.M.

Electric response of the cochlea in newborn animals. Dokl. AN SSSR 149 no.5:1221-1224 Ap '63. (MIRA 16:5)

1. Institut fiziologii im. I.P.Pavlova AN SSSR. Predstavleno akademikom V.N.Chernigovskim.
(LABYRINTH (EAR)) (ELECTROPHYSIOLOGY)

BARU, A.V.; MARUSEVA, A.M.

Electric responses of the peripheral section of the auditory system in various animals. Fiziol. zhur. 49 no.11:1330-1336 N '63. (MIRA 17:2)

1. Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii imeni Pavlova AN SSSR, Leningrad.

AL'TMAN, Ya.A.; MAR[illegible]EVA, A.M.

Evoked potentials of the auditory system. Zhur. vyss. nerv. deiat. 15 no.3:539-[illegible] My-Je '65.

1. Laboratoriya fiziologii sluhovogo analizatora Instituta fiziologii im. I.P. Pavlova AN SSSR.

L 29017-66

ACC NR: AP6018856 SOURCE CODE: UR/0239/65/051/009/1037/1042

AUTHOR: Vartanyan, I.A.; Maruseva, A. M.

ORG: Laboratory of the Physiology of the Auditory Analysor, Institute of Physiology im. Pavlov, AN SSSR, Leningrad (Laboratoriya fiziolgii slukhorogo analizatora Institut fiziologii AN SSSR)

TITLE: Electrical responses of the rat cochlea to the action of brief acoustic clicks

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 9, 1965, 1037-1042

TOPIC TAGS: rat, man, cat, bioelectric phenomenon, audition

ABSTRACT: The range of sounds perceived by rats comprises frequencies higher than those to which the auditory apparatus of human beings and of such laboratory animals as cats and dogs still responds. Hitherto the functional characteristics of the auditory system of rats were studied mainly on the basis of behavior reactions. Under the circumstances it was of interest to measure electric auditory reactions of rats and compare them with those of animals that respond to sound stimuli of lower frequencies. The technique of the experiments was the same as in those carried out on cats. As stimuli clicks with a duration of 0.2 msec were used, which were emitted by a loud-speaker with a frequency range of 200-7,000 cycles. The latent periods of the reactions in rats were 50% greater than in cats, while the amplitude was lower by a factor of 10. For the responses of the cochlea of rats, a high amplitude of the second nerve component N_2 was characteristic; its value was often close to that of the first nerve component N_1. The time of restoration of the amplitude of the rat cochlea response, measured on application of sound stimuli 40-45 db above the threshold, was considerably greater than for cats, i.e., by 60-74 msec. On the basis of the results obtained, the auditory system of rats can be described as inert. Orig. art. has: 3 figures and 1 table. [JPRS]

UDC:

Card 1/1 SUB CODE: 06/ SUBM DATE: 10Apr64/ ORIG REF: 002/ OTH REF: 007/612.822.3+612.85

L 31187-66

ACC NR: AP6022564 SOURCE CODE: UR/0219/66/061/002/0003/0006

AUTHOR: Vartanyan, I. A.; Lebedeva, Z. P.; Maruseva, A. M.

ORG: Laboratory of Auditory Analysor Physiology, Institute of Physiology im. I. P. Pavlov, AN SSSR, Leningrad (Laboratoriya fiziologii slukhovogo analizatora Instituta fiziologii AN SSSR)

TITLE: Electrical reactions of the inferior colliculus of rats to brief sounds (clicks)

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 61, no. 2, 1966, 3-6

TOPIC TAGS: electrophysiology, rat, acoustic biologic effect, audition

ABSTRACT: The electrical reactions of the inferior colliculus of rats are similar to those of cats. Typically, they start with a rapid positive wave followed by a slow negative deviation. In some cases two positive waves with a subsequent negative deviation were recorded. The amplitude of the reactions in the 30 anesthetized white rats studied ranged from 70-400 microvolts. The maximum amplitude was noted in the experiments in which the electrode was in the center of the nucleus. The thresholds of the reactions were somewhat higher than the audibility thresholds of man under the same conditions.

The average threshold in the rats with normal middle ear was somewhat higher than that in cats (the difference was no more than 5 db). The average length of the latent period of the reaction to the clicks was 3.1 milliseconds with the intensity of the stimulus 45-50 db above the threshold. When the intensity of the signal was changed 5-80 db above the threshold,

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UDC: 612.826.5.014.423.014.45

L 31187-66
ACC NR: AP6022564

the latent period decreased from 5 to 2.8 milliseconds. The duration of the positive wave of the response had different values -- from 2-4 milliseconds.

The amplitude of responses caused by a second signal presented at intervals of 3-100 milliseconds from the first was 50% of the amplitude of the first response at a 3-4.6 milliseconds interval. Complete restoration of the amplitude of both responses usually required 60-70 milliseconds.

This paper was presented by Academician V. N. Chernigovskiy on 1 August 1964.
Orig. art. has: 3 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 01Aug64 / ORIG REF: 006 / OTH REF: 013

Card 2/2 CC

MARCHUK, A.I.; MARUSHCHAK, G.N.

Case of preserved pregnancy in a patient with pulmonary and meningeal tuberculosis. Zdrav. Kazakh. 22 no.1:75-77 '62. (MIRA 15:3)

1. Iz Yuzhno-Kazakhstanskogo oblastnogo protivotuberkuleznogo dispansera.

(PREGNANCY, COMPLICATIONS OF)
(MENINGES—TUBERCULOSIS)
(TUBERCULOSIS)

MARUSHCHAK, G.N.; MALOBRODSKIY, V.I.; MARCHUK, A.I.

Intubation anesthesia in extrapleural pneumolysis. Zdravookhr. Kazakh. 23 no.1:70-72 '63 (MIRA 17:2)

1. Iz Chimkentskogo oblastnogo protivotuberkuleznogo dispansera.

MARUSHCHAK, G.N.

Bilobectomy in profuse pulmonary hemorrhage complicated by aspiration pneumonia. Probl. tub. 41 no.6:90-91 '63. (MIRA 17:7)

1. Iz khirurgicheskogo otdeleniya Chimkentskogo oblastnogo protivotuberkuleznogo dispansera (glavnyy vrach - zasluzhennyy vrach Kazakhskoy SSR M.A.Kislitsina).

LEL'CHUK, L.; MARUSHCHAK, I.

Restoration of springs. Tekh. sov. kolkh. RTS, sovkhoz. 20 no.23:7-9 D '59. (MIRA 13:3)
(Tractors--Springs)

L 21076-65 EWT(d)/T/EWP(1) Pg-4 AFWL/IJP(c)

ACCESSION NR: AP4045033 R/0021/64/009/005/0455/0464

AUTHOR: Marushchak, I.

TITLE: A special form for polynomials with least deviation from zero on a compact set in the (z)-plane and coefficients satisfying linear relations

SOURCE: Revue Roumaine de mathematiques pures et appliquees, v. 9, no. 5, 1964, 455-464

TOPIC TAGS: polynomial, complex analysis, exponential approximation, continuous approximation, Chebyshev

ABSTRACT: The author uses Polya's method relating continuous approximations to exponential approximations for studying the problem given in the title. Let K be a compact set in the complex plane, and let $\varphi_0(z)$, $\varphi_1(z)$, ..., $\varphi_n(z)$ be complex linearly independent functions that are continuous on K. The problem consists in finding a polynomial

$$P_n^r(z) = \sum_{k=0}^{n} a_k \varphi_k(z), \qquad (1)$$

Card 1/3

with least deviation from zero on the set K under the condition that the $a_0, a_1, \ldots, a_n$ satisfy the conditions

$$L_i(P_n) = \sum_{k=0}^{n} \alpha_{ik} a_k = 1, \; i = 0, 1, \ldots, r, \; (0 < r < n), \qquad (2)$$

where α_{ik} are given complex numbers with $\operatorname{rang} \|\alpha_{ik}\| = r+1$. Polynomials (1) with coefficients satisfying condition (2) are called polynomials of type r. Using earlier results to reduce the problem to the case of a finite set K and considering a mean of order p of the form

$$H_p(\mu) = \left(\sum_{\nu=1}^{m} \mu_\nu |P(z_\nu)|^p \right)^{\frac{1}{p}}, \qquad (3)$$

where P(z) is a polynomial of type r and z_ν, a $\mu = (\mu_\nu)_{\nu=1}^{m}$, $\mu_\nu > 0$, $\sum \mu_\nu = 1$. , the author proves the following; theorem, Let $M = \{z_j\}_{j=1}^{m}$ be a finite set, p be a positive number greater than or equal to one, and let $\mu = \{\mu_j\}$ be a set of positive numbers. Then their exists a unique polynomial of type r that minimizes $H_p(\mu)$ for a fixed p. A set of points $z_\nu \in K$, $\nu = 0, 1, \ldots, m (m \leq 2(n-r)+1)$ is called a characteristic

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ACCESSION NR: AP4045033

system for Chebyshev problem (1)-(2) if any solution to this problem is simultaneously a solution for the analagous problem in which $K = \{z_\nu\}_{\nu=1}^{m}$, and no subset of this set has property a.; theorem, if $M = \{z_\nu\}_{\nu=1}^{m}$ is a characteristic set for Chebyshev problem (1)-(2) and $\mu = \{\mu_\nu\}$ is a set of positive numbers, then

$$\lim_{p\to\infty} P_p'(z;\ \mu) = M_n'(z),\quad h = \lim_{p\to\infty} h_p(\mu) = \rho_n', \qquad (4)$$

where $h_p = \min_{(\mu)} H_p(\mu)$ and $\rho_n' = \max_{z\in M} M_n(z)$. The convergence is uniform in some disk containing the set M. The polynomials $M_n'(z)$ are computed for several special cases. Orig. art. has: 29 equations

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: MA

NR REF SOV: 003 OTHER: 003

Card 3/3

MARUSHAK, V. Ye.

8(0)

SOV/112-59-1-696

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 92 (USSR)

AUTHOR: Radchenko, L. A., and Marushak, V. Ye.

TITLE: Investigation of Generator Forced Excitation With Allowance for Eddy Currents

PERIODICAL: Izv. Kiyevsk. politekhn. in-ta, 1957, Nr 22, pp 435-445

ABSTRACT: An investigation of the delaying effect of eddy currents in various types of 1.6-14.5-kw generators is presented; the generators operate in the automatic-control system of a "generator-motor" system of electrical drive. The investigation has revealed the following: (1) with a high excitation forcing, the equivalent component of the eddy-current effect grows and delays the transient phenomena; (2) the eddy-current effect can be determined from oscillograms of the generator field current and flux; (3) the dynamic inductance of field windings that droops with higher field forcing must be taken into account.

A.M.B.

Card 1/1

8(0) SOV/112-59-1-831

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 111 (USSR)

AUTHOR: Marushchak, V. Ye.

TITLE: Investigation of Transients in a Generator-Field Circuit With Allowance for Eddy Currents That Appear When the Winding is Switched Off and Closed on a Field-Discharge Resistor

PERIODICAL: Izv. Kiyevsk. politekhn. in-ta, 1957, Vol 26, pp 345-361

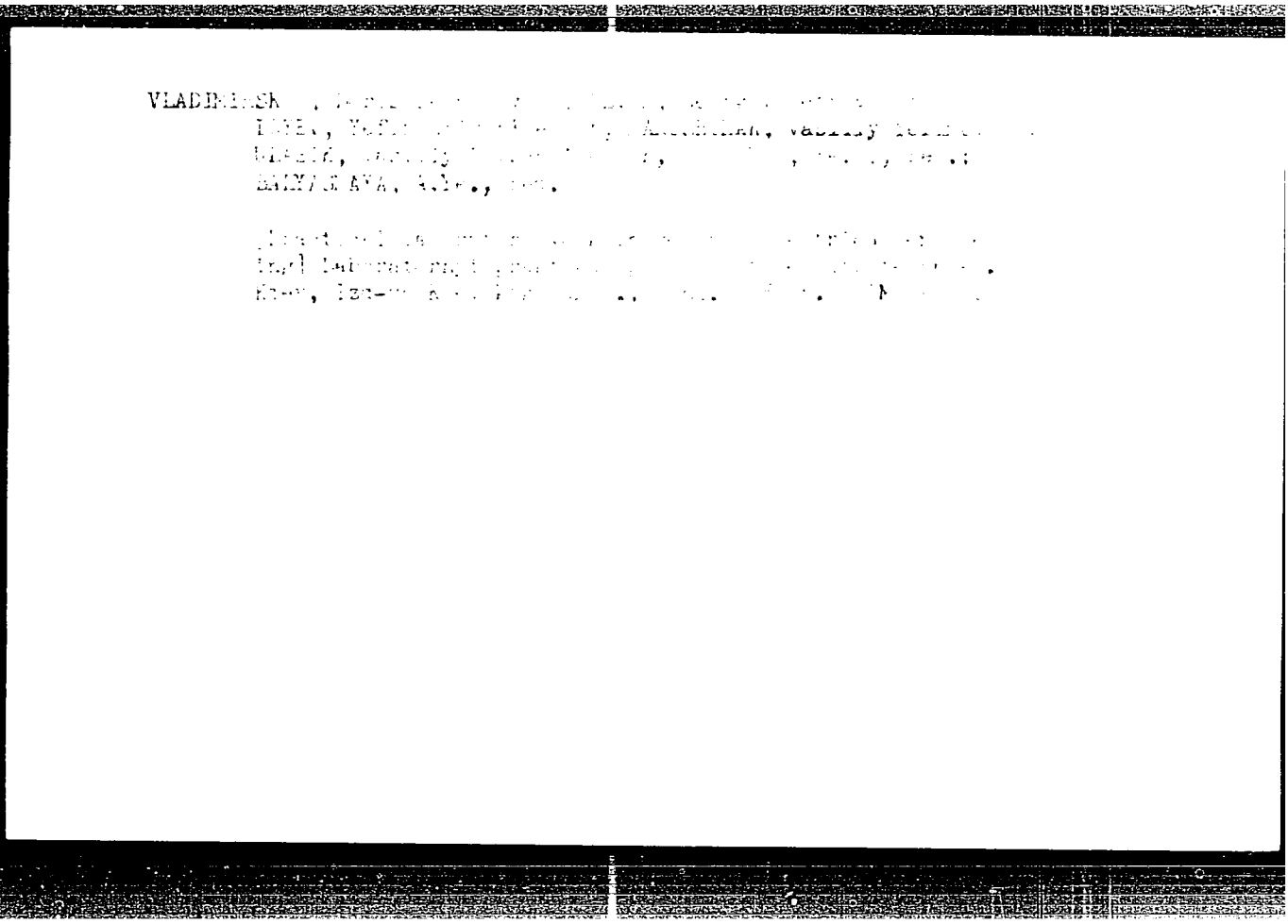
ABSTRACT: Results are reported of experimental investigations of the influence of eddy currents induced in the poles and frame of a DC generator upon the nature of current and magnetic-flux drooping; the curves were taken when the generator-field winding was switched off and closed on a field-discharge resistor. The experiments were conducted with two DC generators: (1) PN-145 N (14.5 kw, 230 v, 63 amp, 1,460 rpm) and (2) G-22/13 (4 kw, 230 v, 17.4 amp, 1,500 rpm). Field current and magnetic flux corresponding to various discharge-resistance values were recorded by an oscillograph.

Card 1/2

Investigation of Transients in a Generator-Field Circuit With Allowance for . . . .

The resultant generator flux is produced by the resultant current which can be considered as consisting of two components: the field-winding current and a current equivalent to the eddy-current effect. Variations in the latter can be determined from oscillograms. Field-current and flux curves are plotted against time. The current equivalent to the eddy-current effect was determined as a difference of the ordinates of the above two curves. The maximum eddy-current bump is higher for high discharge resistances and depends on the characteristics of the generator magnetic circuit. The inference is drawn that in calculating the transients in a DC generator-field circuit, the eddy currents must be taken into account.

V.V.G.



L 34034-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6014024 SOURCE CODE: UR/0056/66/050/004/0861/0870

AUTHOR: Sumbayev, O. I.; Mezentsev, A. F.; Marushenko, V. I.; Petrovich, Ye. V.; Ryl'nikov, A. S.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Chemical shift due to screening of the inner levels of heavy elements

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 4, 1966, 861-870

TOPIC TAGS: heavy element, inner level, screening, chemical bonding, atomic structure, atomic property, tin, molybdenum, tungsten

ABSTRACT: Chemical shifts of the $K\alpha_1$ x-ray lines of Mo-MoO_3, Sn-SnO_2, and W-WO_3 were measured by a method based on alternately introducing the compared sources into the field of vision of the Cochois diffraction spectrometer with compensated aperture aberrations. The $E(K\alpha_1)$ energy differences for the metal and oxide are respectively $+192\pm7$, -152 ± 5, and $+110\pm33$ Mev. Thus, the results previously obtained by the authors (O. I. Sumbayev, A. F. Mezentsev, ZhETF, 48, 445, 1965) for Sn-SnO_2 now have been confirmed by an improved experimental arrangement. It is shown that despite the usually accepted viewpoint (A. Sandstrom, Handb. der Phys., 30, 158, 1957), the inner (K, L) atomic level shifts, due to the formation of chemical bonds, are appreciable, including the heaviest elements. Moreover, their absolute value remains approximately

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L 34834-66

ACC NR: AP6014024

3

constant with a growing Z. This conclusion agrees with the theoretical estimates made by the authors on the assumption that the chemical effects observed are due to internal screening (S. M. Karal'nik, Izv. AN SSSR, ser. fizich., 20, 815, 1956; S. M. Karal'nik, Izv. AN SSSR, ser. fizich., 21, 1445, 1957). It was mentioned that the effect may be used for investigating the nature of the chemical bond as was done previously in the case of light elements. The authors thank Professor D. M. Kaminker for his interest in this work and discussions of the results and V. S. Zykova and Yu. P. Smirnova for carrying out measurements. Orig. art. has: 2 figures, 4 formulas, and 5 tables. [Based on authors' abstract.] [NT]

SUB CODE: 20, 11/ SUBM DATE: 27Oct65/ ORIG REF: 007/ OTH REF: 012

Card 2/2 FV

Effect of the injuries caused by Eurygaster integriceps Put. on the baking properties of wheat. [illegible] and K. P. [illegible] (1938, 18, [illegible] (in Russian). *Rev. Applied Ent.* 27A, [illegible] (1939). Analysis showed no gluten in whole flour prepd. from grains of which 25% had been damaged by this pentatomid, and loaves baked from this flour did not rise and were not sufficiently porous. The life history of the pest is given and [illegible] control methods are suggested. [illegible]

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MAFUSHEV, A. I.

Wheat

Varieties of soft spring wheat for macaroni and coarse meal. Sel. i sem., , 195 .

Monthly List of Russian Accessions, Library of Congress, June 195 . UNCLASSIFIED.

MARUSHEV, A.I., kand.sel'skokhoz.nauk; KUMAKOV, V.A., kand.biolog.nauk

Effect of the shield bug eurygaster integriceps on the quality of wheat seeds. Zashch. rast. ot vred. i bol. 7 no.7:24-25 Jl '62. (MIRA 15:11)
(Russia, Southern--Wheat--Diseases and pests)
(Russia, Southern--Eurygasters)

MARUSHEV, A.I., kand. sel'skokhoz. nauk; KUMAKOV, V.A., kand. biolog. nauk; ASTAKHOVA, N.K., kand. khim. nauk

Effect of the damage caused the shield bug Eurygaster intergriceps on the quality of the wheat grain in the following crop. Agrobiologiia no.1:110-114 Ja-F '64 (MIRA 17:8)

POLAND/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref. Zhur-Khimiya, No 21, 1958, 70871.

Author : Marushevskaya - Vecherkovskaya, Mikhal'sky.
Inst :
Title : Alkyl- and Alkenyl Pyridines. III. Pyridone Sulfones, $(2\text{-}C_5H_4N)CH_2SO_2R$, and Certain Simple Sulfur Derivatives Containing a 2-Pyridyl Methyl Radical.

Orig Pub: Roczn. chem., 1957, 31, No 2, 543-551.

Abstract: By the condensation of $NaSO_2R$, C_6H_5SNa, KSCN, KCN and NH_2CSNH_2 with $R'CH_2Cl$ (I), where R' is pyridyl-2, the following compounds were prepared: $R'CH_2SO_2R$ (II), $R'CH_2SC_6H_5$ (III), $R'CH_2SCN$ (IV), $R'CH_2CN$ (V) and $R'CH_2SC(=NH)NH_2$ (VI) respectively. From the reaction of V with hydrogen sulfide, and the hydrolysis of VI, $R'CH_2CSNH_2$ and $R'CH_2SH$ (VIII) were prepared. To a

Card : 1/7

boiling solution (400 grams of sodium hydroxide in 1.5 liters of water) is added dropwise 604 grams of 2-pyridyl methyl acetate. The mixture is boiled for 30 minutes, and is extracted with chloroform (600 ml x 3 times). Two hundred twenty grams of 2-pyridyl methyl alcohol (IX) is thereby obtained, b.p. 112-113°C/14 mm. A solution of 109 grams of IX in 200 ml of benzene is added to 131 grams of $SOCl_2$ in 500 ml of benzene at $\leq$ 10°C. The contents are stirred for one hour at $\sim$ 20°C. A 98% yield of the hydrochloride of I (X) is obtained, m.p. 127°C (sublimation). I is obtained from X when the latter is dissolved in water, the solution made alkaline with sodium carbonate and then extracted with benzene, b.p. 78-80°C/15 mm. A solution of 16.4 grams

POLAND/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khimiya, No 21, 1958, 70871.

of X in 40 ml of alcohol is added to a solution of 16.25 grams of KCN in 20 ml of water, preheated on a water bath. The mixture is heated for one hour, filtered, the filtrate evaporated under vacuum, and the residue extracted with benzene (3 x 30 ml). V is thereby obtained in a 75% yield, b.p. 84-85° C/1mm, n_D^{20} 1.5205. A solution of 33 grams of C_6H_5SH in 80 ml of benzene is added to a solution of sodium ethylate (4.6 grams of sodium and 50 ml of alcohol), followed by a dropwise addition (with stirring and cooling) of 50 ml of a solution of I in benzene. After 30 minutes, the mixture is filtered and the filtrate is evaporated under vacuum. To the residue 50 ml of 1% sodium hydroxide is added and the mixture is extracted with

Card : 3/7

benzene (3 x 50 ml). An 89% yield of III is thereby obtained, b.p. 97-98° C/0.1 mm, n^{20} 1.6259; picrate, m.p. 124-125° C. A mixture of 20 ml of solution I in benzene (from 0.05 moles of X) and 9.9 grams of $C_6H_5SO_2Na$ in 200 ml of alcohol is boiled for five hours, the filtrate is evaporated under vacuum, 50 ml of 10% sodium carbonate solution is added to the residue and the solution is extracted with chloroform (3 x 70 ml). Thus II is prepared (R = C_6H_5) (II-a), yield 75%, m.p. 113° C; picrate, m.p. 214-216° C (decomposes). In a similar way, the following II are prepared (given are: R, yield in %, melting point of picrate in° C): C_2H_5, 97, 105, 183-185 (decomposes); 4-$CH_3C_6H_4$, 96, 155, 197-198 (decomposes); 4-$CH_3CONHC_6H_4$ (II-b), 80,

Abs Jour: Ref Zhur-Khimiya, No 21, 1958, 70871.

196, 229-230 (decomposes). Twenty ml of 27% H_2O_2 is added to a solution of 5 grams of III in 20 ml of acetic acid. In this way II-a is prepared in a 90% yield. A mixture of one gram of II-b and 10 ml of 20% HCl is heated for two hours, after which time it is diluted with 50 ml of water and is neutralized with a saturated $NaHCO_3$ solution. II is therby prepared (R = 4-$NH_2C_6H_4$), yield ~ 100%, m.p. 199°C. Forty ml of a solution of I in benzene (from 36 grams of X) is added to a boiling solution of 15.2 grams of NH_2CSNH_2 in 200 ml of alcohol, the mixture is boiled for 3 hours, and evaporated. 500 ml of benzene is added to the residue. The hydrochloride of VI is obtained in a 95% yield, m.p. 152°C. Twenty-five grams of the

latter, and 150 ml of 10% NaOH are heated for 30 minutes, neutralized with acetic acid and extracted with benzene (3 x 50 ml); VIII is thereby obtained in a 25% yield, b.p. 102°C/20 mm, 57-58°C/0.6 mm, n_D^{20} 1.5758; picrate, m.p. 163-164°C (decomposes). To a boiling solution of 20 grams of KSCN in 200 ml of acetone is added 30 ml of solution I in benzene (from 32.8 grams of X). The mixture is heated for 2.5 hours, filtered, the filtrate is evaporated and to the residue is added 500 ml of benzene; an 84% yield of IV is obtained, b.p. 77-78°C/0.2 mm, m.p. 25-28°C, n_D^{20} 1.5751; picrate, m.p. 165-167°C (decomposes). A mixture of 5.9 grams of V, 70 ml of a saturated alcoholic solution of ammonia, and 50 ml of alcohol are saturated at ~ 0°C. with hydrogen sulfide, and

MARUSHIN, M. N.

259T69

USSR/Mathematics - Statistical Expectation 1 May 53

"Demonstration of the General Fundamental Lemma of S. N. Bernshteyn for the Sums of Almost Independent Quantities Which Satisfy the Lindberg Condition," M. N. Marushin

DAN SSSR, Vol 90, No 1, pp 21-24

Demonstration showing that S. N. Bernshteyn's lemma concerning the applicability of the limit theorem to the sum of arbitrarily connected quantities x_i (i=1,2,..n) called almost independent (Iz Ak Nauk

259T69

SSSR, Ser Mat, 4, No 2 (1940)) holds true if Bernshteyn's third condition is replaced by the ordinary Lindberg condition. Presented by Acad S. N. Bernshteyn 7 Mar 53.

MARUSHIN, M.N.

Mathematical Reviews
Vol. 15 No. 2
Feb. 1954
Analysis

Marušin, M. N. On necessary and sufficient conditions for applicability of a limit theorem of order $p<2$. Doklady Akad. Nauk SSSR (N.S.) **90**, 727–730 (1953). (Russian)

The author proves a version of the central limit theorem stated without proof by Bernstein [same Doklady (N.S.) **24**, 3–7 (1939); these Rev. **1**, 340]. The theorem gives necessary and sufficient conditions that, if $0<p<2$, if s_n is the sum of n independent random variables, and if D_n^2 is the variance of the sum of these variables after each is cut off at some suitable point, then s_n/D_n is asymptotically normal and $E\{|s_n/D_n|^p\}$ is asymptotically the corresponding normal moment. *J. L. Doob* (Urbana, Ill.).

ACCESSION NR: AP4012074 S/0020/64/154/002/0262/0263

AUTHOR: Marushin, M.N.

TITLE: The problem of applicability of a limit theorem of the order $p > 0$ to a non-homogeneous Markov chain with two states

SOURCE: AN SSSR. Doklady*, v. 154, no. 2, 1964, 262-263

TOPIC TAGS: limit theorem, Markov chain, non-homogeneous Markov chain, discrete time Markov process, mathematical analysis

ABSTRACT: A non-homogeneous Markov chain in the form of a succession of a series of random variables

$$x_{k1}, x_{k2}, \ldots, x_{kk} \quad (k = 1, 2, \ldots, n), \tag{1}$$

each of which takes on only the value 0 and 1 is examined. Paper is concerned with the formulation of some theorems in which the necessary and sufficient conditions for the applicability of a

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ACCESSION NR: AP4012074

limit theorem of any order $p > 0$ to the sum of the values bound in a non-homogeneous Markov chain with two states are set forth. Six theorems are proved and then applied to the solution of two examples. Orig. art. has: 2 equations.

ASSOCIATION: Kiyevskiy institut grazbdanskogo vozhdrishnogo flota (Kiev civil air fleet institute)

SUBMITTED: 15Jul63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 002 OTHER: 000

Card 2/2

MARUSHIN, M.N. (Kiyev)

Some remarks on convergence to Poisson's asymptotic law. Teor. veroiat. i ee prim. 10 no.2:371-375 '65.

(MIRA 18:6)

KUZ'MUR.W, Yu.F.; MARUSHIN, V.A.

Effect of simazine on rose plantations during [illegible]
Trudy Inst. biol. UFAN SSSR no. 43:179-182 [illegible]

1. Bashkirskaya lesnaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta lesovodstva i mekhanizatsii lesnogo khozyaystva.

MARUSHKEVICH, M.

Dreams lead us through our life. Rab. i sial. 34 no.1:4-5 Ja '58
(Women--Employment) (Geologists) (MIRA 11:1)

MARUSHKEVICH, M.

"Easy job." Rab. i sial. 34 no.4:5-6 Ap '58. (MIRA 11:5)

1. Kalgas "Pagranichnik," Brestski rayon.
(Brest District--Women as farmers)

KHARLAMOV, A. [Kharlamau, A.]; MARUSHKEVICH, M.

A young but experienced worker. Rab.i sial. 35 no.3:11 Mr '59.
(MIRA 12:3)

1. Kolkhoz " 17 Oktyabrya," David-Gorodetskiy rayon.
(David-Gorodok District--Women as farmers)

MARUSHKEVICH, M.

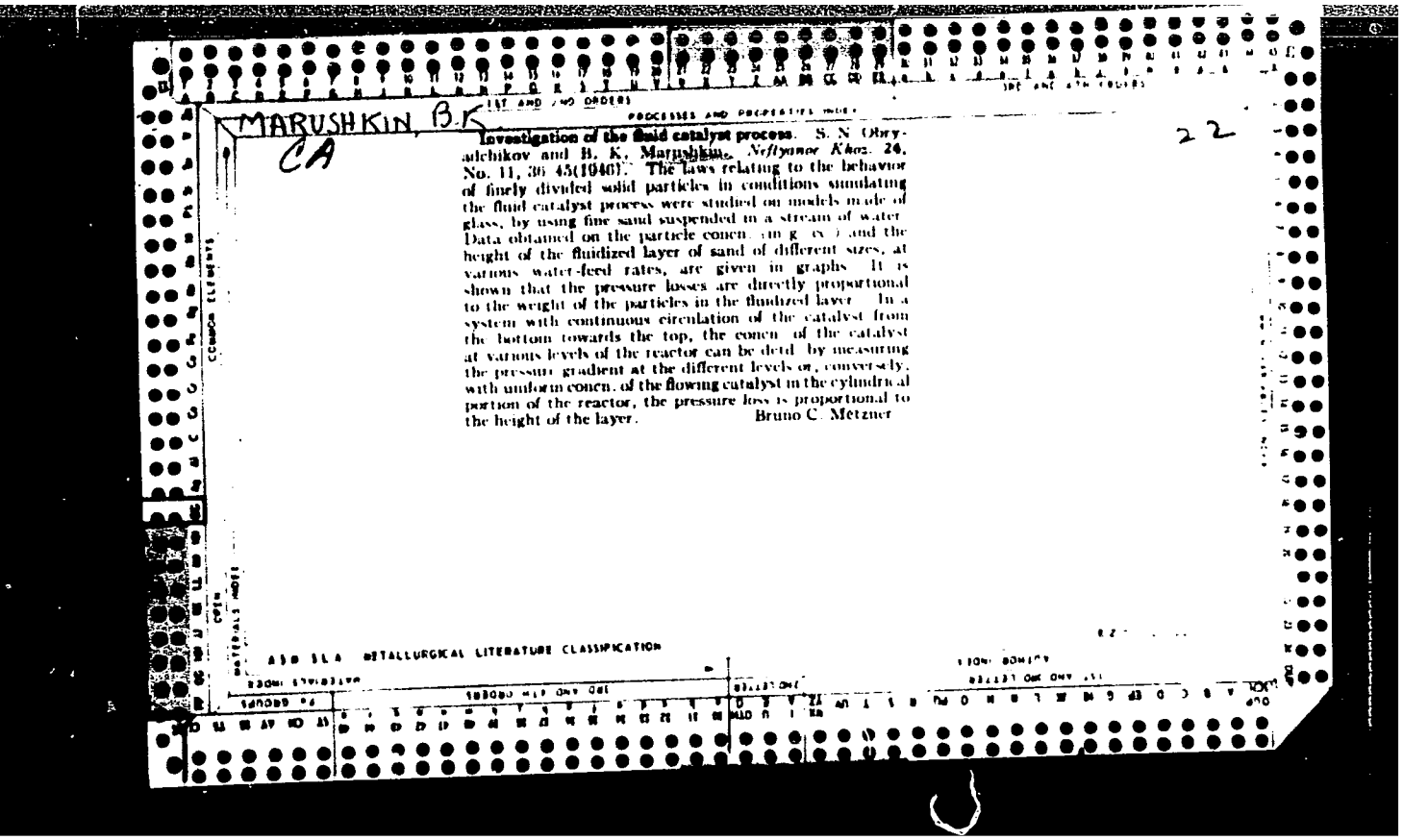
You are a Communist. Rab.i sial. 38 no.12:4-5 D '62.
(MIRA 16:1)

1. Kolkhoz "Kamunist", Kirovskiy rayon.
(Mogilev Province--Dairying)

MARUSHKEVICH, M. (Goretskiy rayon)

Deep furrows. Rab. i sial. 39 no.3:6 Mr '63.
(MIRA 16:4)

(Gorki District--Women in public life)



MARUSHKIN, B.K.
CA

22

Investigation of the fluid catalyst process. S. N. Obryadchikov and B. K. Marushkin. *Neftyanoe Khoz.* 24, No. 11, 36-45(1946). The laws relating to the behavior of finely divided solid particles in conditions simulating the fluid catalyst process were studied on models made of glass, by using fine sand suspended in a stream of water. Data obtained on the particle concn. (in g. cc.) and the height of the fluidized layer of sand of different sizes, at various water-feed rates, are given in graphs. It is shown that the pressure losses are directly proportional to the weight of the particles in the fluidized layer. In a system with continuous circulation of the catalyst from the bottom towards the top, the concn. of the catalyst at various levels of the reactor can be detd. by measuring the pressure gradient at the different levels or, conversely, with uniform concn. of the flowing catalyst in the cylindrical portion of the reactor, the pressure loss is proportional to the height of the layer. Bruno C. Metzner

A10 SL4 METALLURGICAL LITERATURE CLASSIFICATION

SOV/65-58-3-4/14

AUTHORS: Marushkin, B. K.; Bondarenko, M. F.; Tsalik, V. L. and Bayiavletova, F. G.

TITLE: The Effect of Recycling on the Definition of Separation During Purification With Selective Solvents. (Vliyaniye risaykla na chetkost' razdeleniya pri ochistke izbiratel'nymi rastvoritelyami).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.3. pp. 21 - 24. (USSR).

ABSTRACT: During fractionation of crudes with selective solvents, the efficiency of separation is increased when a recycle is used in the extraction system. The recycle can be produced by changing the temperature of the extraction solution; by adding an anti-solvent to the extraction solution; by supplying an extract to the extraction solution: by supplying to the extraction solution a second solvent which does not mix completely with the solution. The experimental part of this investigation consisted of three series of tests. In the first series the efficiency of various methods of agitating the recycle was compared. The recycle was prepared by (a) changing the temperature, (b) flooding the extraction solution and (c) adding the extract to the extraction solution. The properties of

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001032620020-5"

The Effect of Recycling on the Definition of Separation During Purification With Selective Solvents.

the crude components of the recycle were then compared. The extraction solution comprised a mixture of 400 ml of phenol and 100 ml of petroleum product which boiled within the limits of 200 - 370°C, d_4^{20} = 0.848, and sulphur content of 1.15%. This mixture was homogeneous at and above 50°C. Figures 2 and 3 show the dependence of the properties of the raffinate, separated from the recycle, on the method of preparing the latter. During the second series the influence of the method of agitating the recycle during a three-stage counter-current extraction was investigated (Fig.4), dry phenol was used as solvent. The third series of experiments was carried out to determine the possibility of compensating the lowering of the definition of the fractionation when adding the extract to the extraction solution by increasing the supply of phenol, or by increasing the number of stages during the purification. The conditions and results of the second and third series of experiments are given in a table on page 23. The authors concluded that the method of agitation of the

SOV/65-58-3-4/14

The Effect of Recycling on the Definition of Separation During Purification with Selective Solvents.

recycle influences its quality and the definition of the separation of the crude with the aid of phenol. During the purification with phenol, the supply of the extract to the extraction solution instead of water, lowers the degree of definition of separation, and makes it possible to reduce the supply of water. There are 4 Figures, 1 Table and 3 Soviet References.

ASSOCIATION: Ufimskiy neftyanoy institut. (Ufa Petroleum Institute).

1. Petroleum--Fractionation 2. Solvent extraction--Effectiveness
3. Solvent extraction--Materials

Card 3/3

SOV/65-59-7-8/12

AUTHORS: Kondrat'yev, A.A., and Marushkin, B.K.

TITLE: Calculation of Minimum Refluxing in the Rectification of a Complex Mixture (K raschetu minimal'nogo orosheniya pri rektifikatsii slozhnoy smesi)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 7, pp 31-37 (USSR)

ABSTRACT: This paper was presented at the scientific-technical conference of the Ufimskiy neftyanoy institut (Ufa Oil Institute) in February, 1957. In it the authors consider analytically the calculation of the minimum value of the reflux number (ratio of the number of mols of reflux in the feed section to that of distillate). They show that for complex mixtures cases are possible where the rectification column becomes ideal and propose a method for calculating the composition of the rectified product for such columns. The composition is calculated unambiguously from material balances. If the feed conditions and the yield of distillate are selected the upper and lower valves of the reflux number are available; the former is found from the condition that the highest- and the lowest-boiling components are absent from the

Card 1/2

Calculation of Minimum Refluxing in the Rectification of a Complex Mixture

distillate and residue, respectively; the latter is fixed by the column ceasing to be in the full, stable state. It was shown that for ideal columns and complex mixtures the light-components contents increase and those of the heavy components decrease in the distillate with increased refluxing, the yield of rectified products and column feed conditions being kept constant; or, increasing the proportion of feed evaporation at the entry to a full column, distillate removal can be higher. The authors find that these results can be applied to columns within the ideal range for estimating the accuracy of existing methods of calculating minimum reflux. There are 3 figures and 3 tables.

Card 2/2

ASSOCIATION: Ufimskiy neftyanoy institut (Ufa ! Oil Institute)

28036
S/081/...
B102/B101

11.0140

AUTHORS: Marushkin, E. K., Berg, G. A., Sidorocheva, L. V., Baydavletova, F. G.

TITLE: Extractive deparaffination of diesel fuel

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 490, abstract 15M192 (Sb. tr. Ufimsk. neft. in-ta, no. 2, 1960, ...)

TEXT: Deparaffination of the diesel fraction of Devonian petroleum (boiling point ... - ...°C; specific weight, 0.847; solidifaction point, -1?°C; content of n-paraffines, 26% by weight) was used as an example to show that phenol extraction is a useful method for deparaffination of directly fractionated fuel. The separation of n-paraffins is considerably improved if the number of extraction stages is increased and if relatively narrow fractions are separated. A sharp increase of the phenol consumption improves the indices obtained only little. The clearness of separation attained in the experiments was insufficient to obtain a winter sort of diesel fuel (solidification point, -35 or -45°C). It is, however, possible to improve the indices of the process if solvents of higher selectivity are ...

Card 1/2

25036

Extractive deparaffination of B102,B101

chosen [Abstracter's note: Incomplete translation]

Card 1/1

KONDRAT'YEV, A.A.; MARUSHKIN, B.K.; BONDARENKO, M.F.

Selecting a reflux system for rectification columns. Khim.i tekh. topl.i masel 6 no.2:62-64 F '61. (MIRA 14:1)

1. Ufimskiy neftyanoy institut.
(Distillation apparatus)

MARUSHKIN, B.K., dotsent

"Theory and calculation of distillation and rectification" by S.A. Bagaturov. Reviewed by B.K.Marushkin. Izv.vys.ucheb.zav.; neft' i gaz 5 no.8:111-112 '62. (MIRA 17:3)

MARUSHKIN, B.K.; KONDRAT'YEV, A.A.

Calculation of the composition on the feed plate in rectification of multicomponent mixtures. Izv. vys. ucheb. zav.; neft' i gaz 7 no.10:55-59 '64. (MIRA 18:2)

1. Ufimskiy neftyanoy institut.

KONDRAT'YEV, A.A.; MARUSHKIN, B.K.

Selecting the flow sheet for the rectification of multicomponent mixtures. Khim. i tekh. topl. i masel 10 no.7:53-55 Jl '65. (MIRA 18:9)

1. Ufimskiy neftyanoy nauchno-issledovatel'skiy institut.

LYASHKEVICH, Z.M.; MARUSHKIN, I.A.

New alkali massif in the western part of the Alay Range.
Geol. sbor. [Lvov] no.5/6:582-584 '58. (MIRA 12:10)

1.Gosuniversitet im. Ivana Franko, L'vov.
(Alay Range--Rocks, Igneous)

SOV/20-127-3-49/71

3 (5)
AUTHOR: Marushkin, I. A.

TITLE: A New Discovery of Ordovician Sediments in the Alay Range

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 649-650 (USSR)

ABSTRACT: The geological structure of the western part of the southern slopes of the Alay has been little investigated, which is especially true of the stratigraphy of the widespread Paleozoic sediments. This is due to the remoteness and difficult accessibility of the region. The presence of Ordovician in the central ranges of the Tyan'-Shan' on the northern slope of the Zeravshan Range has been known since 1928 (Refs 1, 2), in the Alay, however, only since 1943 (Ref 4) and 1946 (Ref 3). Data on the stratigraphy of the Lower Paleozoic was obtained in the years 1954-57 while the geological map of the southern slope of the Alay was drawn. A monotonous mass of dark grey, sometimes black, fine-crystalline solid limestones and conglomerates (size: 50 x 200 m) occurs at the watershed of the rivers Kyzylsu and Tekelik. There, at the Gorumdy Pass, graptolites Didymograptus (Expansograptus) sp. were found in slates of the mass mentioned. According to A. M. Obut's classification, they are characteristic of the Lower Ordovician. Its visible depth attains 1700-1800 m.

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A New Discovery of Ordovician Sediments in the Alay Range SOV/20-127-3-49/71

Its correlation with the masses deposited on top of it is uncertain. Intrusions of fine-grained albite granites occur on the southern slope breaking through Ordovician as well as the non-structured Silurian and Lower Devonian. It is difficult here to distinguish Ordovician from Silurian sediments because of insufficient faunistic characterization. There are 4 Soviet references.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko (L'vov State University imeni Iv. Franko)

PRESENTED: February 19, 1959, by D. V. Nalivkin, Academician

SUBMITTED: February 4, 1959

Card 2/2

MARUSHKIN, I.A.

Terrigenous facies of the Visé stage in the Tekalik Basin (Alay Range). Geol.sbor. [Lvov] no.7/8:326-328 '61. (MIRA 14:12)

1. Gosudarstvennyy universitet imeni Ivana Franko, L'vov.
(Tekalik Valley--Geology, Stratigraphic)

GAVRILOVSHKIN, I.A.

New data on the stratigraphy of Upper Paleozoic sediments in the Koksu Basin (Alay Range). Visnyk L'viv.un. Ser.geol. no.1:[illegible]31 '62. (MIRA 16:7)

(Alay Range--Geology, Stratigraphic)

MARUSHKIN, I.A.; SOLOV'YEVA, M.N.

New find of Permian sediments in the western part of the Alay Range. Vest. L'vov. un. Ser. geol. no. [illegible]-51 [illegible]

(MIRA 19:[illegible])

LYASHKEVICH, N.M.; [illegible], I.F.

Two phases [illegible] granites in the Turkestan [illegible] range.
Tadzh. otd. Vses. min. ob-va no. 1 [illegible] 162.

1. Institut geologii i poleznykh iskopayemykh AN Uzb.SSR.

MARUSHKIN, I.A.

Deep-fault zone on the boundary of the southern Tien-Shan and the Pamirs in the Paleozoic. Geol.sbor. [Lvov] no.9:131-144 '65. (MIRA 18:12)

AUTHORS: Kazanskiy, B. A., Member of the AN USSR, Marushkin, M. N. (Deceased), Sterligov, O. D., and Belen'kaya, A. P. 20-4-20/52

TITLE: The Catalytic Dehydrogenation of Isopentane (Kataliticheskaya degidrogenizatsiya izopentana)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 619-622 (USSR)

ABSTRACT: From the economical point of view the use of isopentane is important for the increased supply of raw materials to the production of synthetic caoutchouc. The catalytic dehydration of isopentane to iso-amylenes and of these to isopren ($C_5H_{12} \rightarrow C_5H_{10} \rightarrow C_5H_8$) can be one of the ways of producing isopren. There is only little literature on this subject (references 1 - 3). So the investigation of this reaction is still very young. The second author produced at the institute (see "Association") an active alumochrome catalyzer for the dehydration of n-butane and propane which can be employed for the purpose discussed here. It consists of (in molar-%): Al_2O_3 88, Cr_2O_3 9, K_2O 3. The method of the dehydrogenation of isopentane is described. In the condensate (by means of dry ice) the total unsaturatedness was determined

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bromometrically according to Rosenmund (reference). The proportion of isopren as to weight was determined by reaction with maleic aldehyde. The activity of the catalyzer is increased when the temperature rises. It reaches its highest stage at 550°. The productivity is rapidly increased when the reaction temperature and the supply of raw materials are increased. At 575° the productivity of the catalyzer decreases (figure 3) as well as its selectivity as a result of the increasing cracking reaction (figure 1). At the optimal temperature of 550° stability, degree of contamination, and the most profitable duration of the working cycle were stated. The average activity (productivity) per cycle decreases with the extension of the cycle. Figure 4 shows that the selectivity is independent of the degree of contamination. When the working period lasts for more than 8 hours without interruption the degree of dehydration falls to almost 1/3 during the first 4 hours and then remains so without noticeable changes. After the regeneration the catalyzer completely reaches its initial activity. The contamination is obviously connected with the disturbance of the catalyzer by deposits of "coke". When the temperature rises from 500° to 550° the proportion of total unsaturatedness almost trbles. The concentration of isopren increases tenfold, the concentration of

The Catalytic Dehydrogenation of Isopentane. 20- -20/52

2-methylbutene-2 almost doubles, of 2-methylbutene-1 trebles whilst the proportion of 3-methylbutene-1 hardly changes. Within the range of these temperatures 2-methylbutene-2 and 2-methylbutene-1 prevail whilst the other two substances are contained in small quantities only. Table 2 shows that one has to be careful in employing the spectrums of the dispersion of light combinations to the analysis of the substances discussed here, as the lines of isopren and 3-methylbutene-1 overlap. With small proportions of isopren already line 1640 cm^{-1} (of 3-methylbutene-1) but also line 1651 cm^{-1} (of 2-methylbutene-1) which leads to sharply increased results for the last two. There are 4 figures, 2 tables, and 4 references, 3 of which are Slavic.

ASSOCIATION: Institute for Organic Chemistry imeni N. D. Zelinskiy of the AN USSR (Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: July 22, 1957

AVAILABLE: Library of Congress

Card 3/3

KRASIKOVA, V.I., kand. biol. nauk; RUBASHKINA, S.Sh., starshiy nauchnyy sotrudnik; MARUSHKINA, V.I., mladshiy nauchnyy sotrudnik; LUDANOVA, N.V., mladshiy nauchnyy sotrudnik

Antibacterial substances preventing the bacterial deterioration of chilled meat. Trudy VNIIMP no.16:227-230 '64.
(MIRA 18:11)

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